AMENDMENTS TO THE SPECIFICATION

Please amend paragraph 0062 as follows:

[0062] **Figure 4** is a flow chart illustrating an embodiment of the invention. In this example, the execution of various events is monitored **405**. If an event meets certain filter conditions **410**, certain data regarding the event is captured **415**. In one embodiment of the invention, the data may include an instruction address and an effective address of an executed load. If the buffer is structured as a circular buffer with a pointer, the pointer is incremented **420**. The captured data is then stored in the ~~buffer~~ buffer **425**. As some point in time an event may occur that causes a freeze in buffer operation. Examples of an event may include a cache miss, a memory exception, or a programmed event that matches a particular criterion. If an interrupt condition is met **430**, the operations of the buffer are frozen **435**. The data that has been stored in the buffer, involving data regarding the last *n* stored events, is ~~evaluated~~ evaluated **440**. The evaluation of the data may include deriving relationships between the executed events **445**. The operation of the buffer may then again continue with the monitoring of event execution **405**.